

## ABSTRACT

In order to provide a variable gain amplifier of enhanced linearity and wide variable gain range, an AM-modulated signal reception circuit in which the noise of an input portion is reduced so as to improve the follow-up characteristic of an AGC circuit, and an AM-modulated signal detection circuit which produces an output precisely corresponding to a peak value envelope, the variable gain amplifier comprises a differential input amplifier which includes transistors T1 and T2 (in Fig. 8) constituting a differential pair, and a constant current circuit Is operating as an absorption current circuit of the transistors T1 and T2, and a variable impedance which is connected between the sources of the respective transistors T1 and T2, wherein the gain of the differential input amplifier is made variable by variably controlling the value of the variable impedance.